



Annual Standards and Specifications

for

Erosion and Sediment Control

and

Stormwater Management

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INTRODUCTION

The University of Mary Washington (UMW) Erosion and Sediment Control and Stormwater Management Program is an integral component of UMW's design, construction, maintenance, and management of the University's facilities and campuses located in Fredericksburg, Stafford County, and King George County. UMW's Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Annual Standards and Specifications submittal has been developed to ensure that all land-disturbing activities undertaken by UMW will proceed in accordance with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et. seq.), and The Virginia Erosion and Sediment Control Regulations (§ 9VAC25-840 et. seq.) and the Virginia Stormwater Management Program (VSMP) permit regulations (9VAC25-870 et. seq.), as related to municipal separate storm sewer systems (MS-4) and construction activities. In addition, stormwater management plans will be informed and coordinated with UMW's approved Stormwater Master Plan to the fullest extent possible.

UMW Annual Standards and Specifications for ESC and SWM shall be administered by Facilities Services and shall apply to all plan design, construction, and maintenance activities undertaken by UMW, either by its internal workforce or contracted to external entities, where such activities are regulated by the Virginia ESC Law and regulations or the Virginia SWM Act and VSMP permit regulations. During any of UMW's land-disturbing activities, compliance with the approved UMW Annual Standards and Specifications for ESC and SWM (and all parts thereof), shall be observed.

UMW Annual Standards and Specifications for ESC and SWM are submitted to the Department of Environmental Quality (DEQ) for review and approval on an annual basis. This submittal constitutes UMW's commitment to execute all provisions contained herein on our regulated land-disturbing activities and land development projects. As such, this submittal will be made available and utilized as an operational guidance document by all appropriate UMW and DEQ personnel. These Annual Standards and Specifications (as well as, any modifications) will be made available on the University's website at <http://adminfinance.umw.edu/facilities>.

I certify under penalty of law that all documents and all attachments related to the submission and updating of the UMW Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management have been prepared under my direction or supervision in a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of a fine and imprisonment for knowing violations.”

Gary T. Hobson, P.E., Dual Program Administrator 0128

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Acronyms and Abbreviations

| | |
|---------|--|
| Bay | Chesapeake Bay |
| BMP | Best Management Practice |
| Board | Virginia Soil & Water Conservation Board |
| CWA | Clean Water Act |
| CSS | Combined Sewer System |
| DCR | Department of Conservation and Recreation |
| DEQ | Department of Environmental Quality |
| EPA | Environmental Protection Agency |
| ERP | Enforcement Response Plan |
| ESC | Erosion & Sediment Control |
| FM | Facilities Management |
| GIS | Geographic Information Systems |
| GPS | Global Positioning System |
| HUC | Hydrologic Unit Code |
| IDDE | Illicit Discharge Detection & Elimination |
| JMU | James Madison University |
| LID | Low Impact Development |
| MEP | Maximum Extent Practicable |
| MCM | Minimum Control Measure |
| MS | Minimum Standard |
| MS4 | Municipal Separate Storm Sewer System |
| NPDES | National Pollution Discharge Elimination System |
| NOI | Notice of Intent |
| NOV | Notice of Violation |
| POC | Pollutants of Concern |
| RLD | Responsible Land Disturber |
| SOP | Standard Operating Procedures |
| SWM | Stormwater Management |
| SWPPP | Stormwater Pollution Prevention Plan |
| TMDL | Total Maximum Daily Load |
| UA | Urbanized Area |
| VESCH | Virginia Erosion and Sediment Control Handbook |
| VESCL&R | Virginia Erosion & Sediment Control Law & Regulations |
| VPDES | Virginia Pollution Discharge Elimination System |
| VSMP | Virginia Stormwater Management Program |
| WLA | Waste Load Allocation |

University of Mary Washington
Annual Standard and Specifications

1.0 ANNUAL STANDARDS AND SPECIFICATIONS ADMINISTRATION

All UMW owned property and projects involving land-disturbing activity are subject to the Virginia Erosion and Sediment Control Law (§62.1-44 et seq. as amended), the Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq. as amended), and the Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et seq. as amended) and the Virginia Stormwater Management Act (62.1-44. et seq.) and the VSMP Regulations (9VAC25-870 et. seq. as amended) shall be bound by the UMW Annual Standards and Specifications for ESC and SWM. In addition, stormwater management plans will be informed and coordinated with UMW's approved Stormwater Master Plan to the fullest extent possible.

UMW has three campus locations that utilize UMW's AS&S.

- University of Mary Washington Fredericksburg Campus
1301 College Ave, Fredericksburg, VA 22401
- University of Mary Washington Stafford Campus
121 University Blvd, Fredericksburg, VA 22406
- University of Mary Washington Dahlgren Campus
4224 University Drive, King George, VA 22485

1.1 UMW Annual Standards and Specifications for ESC and SWM approved by DEQ are composed of general specifications. The general specifications for ESC and SWM that apply to the land-disturbing activities, listed in 1.0 above, include by reference the following:

- a. Virginia Erosion and Sediment Control Law (§62.1-44 et seq. as amended)
- b. Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq. as amended)
- c. Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et seq. as amended)
- d. Virginia Erosion and Sediment Control Handbook, 1992
- e. Virginia Stormwater Management Act (§62.1-44 et seq. as amended)
- f. Virginia Stormwater Management Permit Regulations (9VAC25-870 et seq. as amended)
- g. Virginia Stormwater Management Handbook, 1999, as amended
- h. Virginia Stormwater BMP Clearing House at:
<http://www.vwrrc.vt.edu/swc/index.html>

- i. Technical Bulletins, as amended, on the Virginia DEQ website at www.deq.virginia.gov
 - j. Memos, as amended, on the Virginia DEQ website at www.deq.virginia.gov
 - ESC Technical Bulletins, as amended, on DEQ web site at: <http://www.deq.virginia.gov/programs/water/stormwatermanagement/Publications.aspx>.
 - ESC Technical Bulletin #4 – Nutrient Management for Development Sites at: <http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf>
- 1.2 Any land-disturbing activity carried out in a locality with a local ESC program with more stringent regulations than those of the state program shall be consistent with the requirements of the local program.
- 1.2.1 The City of Fredericksburg adopted on October 8, 2013, the Unified Development Ordinance, Chapter 72, which includes Development Standards related to Utilities and more specifically Stormwater, §72-54.3. Development on the Fredericksburg Campus should consider §72-54.3.B.9 regarding post-development stormwater runoff rate of flow and characteristics requiring the design of stormwater management facilities to employ the ten-year frequency, two-hour duration storm to determine pre- and post- development flows; and §72-54.3.B.11 regarding specific local watersheds (volume control areas) and requirement to remove the first one-half inch of runoff from all new impervious surfaces
- 1.2.2 The use of VESCH control measures (along with accompanying technical documents) is strongly preferred.
- (i) Non-VESCH control measures, BMPs, and specifications may be included in the Annual Standards and Specifications submittals but their use may be further reviewed and approved by the DEQ on a project specific basis.
 - (ii) Should non-VESCH control measures fail to effectively control soil erosion, sediment deposition, and non-agricultural runoff, then VESCH control measures shall be utilized.
- 1.3 Site-Specific ESC Plans shall be prepared for all projects involving a regulated land-disturbing activity as defined in §62.1-44.15:51. Please note that the Chesapeake Bay Preservation Areas land disturbance threshold is greater than or equal to 2,500 square feet. Site-specific ESC plans shall be submitted to the UMW Facilities Services for review. Checklists that summarize the required components of the ESC Plans are included in Appendix A. Prior to starting a land-disturbing project, as defined in §62.1-44.15:51, the project must have written approval issued by UMW Facilities Services.

When non-VESCH control measures are used, all applicable practical information including definition, purpose, conditions where practice applies, planning considerations, design criteria, construction specifications, design tables and plates, and maintenance and inspections shall be included in the ESC Plan.

When proprietary BMPs are proposed, the specific product manufacturer, appropriate design storm, inspection frequency, maintenance, and other applicable product information shall be provided. Use of proprietary BMPs may be further reviewed and approved on a project-specific basis. For projects that must obtain a GCP this information shall be included in the SWPPP for that project.

- 1.4 A DEQ-Certified Responsible Land Disturber (RLD) shall be designated prior to initiating the land disturbing activity. UMW will notify DEQ of the RLD name, certification number and contact information at least two weeks prior to construction.
- 1.5 If the addition of impervious surfaces is part of the scope of work for a project, a SWM narrative and/or schematic must be submitted concurrently to explain/show how the run-off will be treated.
- 1.6 Site specific SWM plans shall be prepared for all projects involving a regulated land-disturbing activity that requires:
 - A Virginia Stormwater Management Program General Permit for Discharges from Construction Activities
 - Land-disturbing activity contained within a watershed of a regional water quality Stormwater management facility.
 - Incorporates the use of an LID and/or BMP.
 - Changes to the University MS4.

Site specific SWM plans shall be submitted to UMW Facilities Services for review. Prior to starting a land-disturbing project requiring a SWM plan, the project must have an approval issued by Facilities Services.

- 1.7 UMW Facilities Services may request DEQ to grant a project specific variance to the approved UMW Annual Standards and Specifications for ESC and SWM. All requested variances are to be considered unapproved until written approval from DEQ is received. Refer to Section **6.0** for more information on variances.

2.0 ANNUAL STANDARDS AND SPECIFICATIONS PERSONNEL

The UMW Facilities Services shall be the authority for administering UMW Projects under the UMW Annual Standards and Specifications for ESC and SWM. The following is a breakdown of related responsibilities and titles. Responsibilities may be combined in terms of staffing resources only if the person responsible for the task(s) is qualified per the Virginia Erosion and Sediment Control and Stormwater Management Certification Regulations (9VAC25-850 et seq. as amended). The following titles are designated to ensure compliance with UMW Annual Standards and Specifications for ESC on all UMW projects.

- a. An AS&S holder may enter into agreements or contracts with soil and water conservation districts, adjacent localities, or other public or private entities to assist with carrying out the provisions of this article, including the review and determination of adequacy of erosion and sediment control plans submitted for land-disturbing activities on a unit or units of land as well as for monitoring, reports, inspections, and enforcement where authorized in this article, of such land-disturbing activities.
- b. Certification roles are currently fulfilled at UMW in the following manner:
 - DEQ-Certified Inspector for ESC – In-house by Tanasha Whittaker
 - DEQ-Certified Inspector for SWM - In house by Tanasha Whittaker primarily responsible for land disturbing and capital projects; and Holly Chichester (Awaiting testing-delay due to COVID restrictions) primarily responsible for MS4 inspections.
 - DEQ-Certified Plan Reviewer for ESC – In-house by Gary Hobson, registered professional engineer.
 - DEQ-Certified Plan Reviewer for SWM – Contracted service utilizing civil engineering term contract to have DEQ Certified Plan Reviewer provide review of stormwater plans on a project by project basis.
 - DEQ-Certified Program Administrator for ESC – In-house by Gary Hobson.
 - DEQ-Certified Program Administrator for SWM – In-house by Gary Hobson.

2.1 “DEQ-Certified inspector for ESC” means an employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of project inspection;; or (ii) is enrolled in the Board’s training program for project inspection and successfully completes such program within one year after enrollment; and (iii) shall be responsible to inspect as mandated by the VESCL&R erosion and sediment control measures to ensure proper installation in accordance with the approved plan and record the state and effectiveness of such measures in an effort to minimize site erosion and sediment control.

2.2 DEQ-Certified Inspector for SWM” means an employee or agent of UMW: (i) holds a certificate of competence from the Board in the classification of project inspector in the area of SWM; or (ii) is enrolled in the Board’s training program for project inspector and successfully completes such program within one year after enrollment;

and (iii) shall be responsible to inspect the construction of permanent stormwater management controls.

- 2.3 “DEQ-Certified plan reviewer for ESC” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review: or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.4 “DEQ-Certified plan reviewer for SWM” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review: or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.5 “DEQ-Certified program administrator for ESC” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review: or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.6 “DEQ-Certified program administrator for SWM” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review: or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.7 “DEQ-Certified combined administrator for ESC” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of program administration, plan review and project inspection; or, (ii) is enrolled in the Board’s training program for program administration and successfully completes such program within one year after enrollment.
- 2.8 “DEQ-Certified combined administrator for SWM” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of program administration, plan review and project inspection; or, (ii) is enrolled in the Board’s training program for program administration and successfully completes such program within one year after enrollment.

3.0 ANNUAL STANDARDS AND SPECIFICATIONS IMPLEMENTATION

ESC and SWM plans shall comply with UMW Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management, the Virginia Erosion and Sediment Control Law (62.1-44 et seq.), the Virginia Stormwater Management Act (62.1-44 et Seq.), associated ESC and SWM regulations, and the Virginia Stormwater Management Program Permit regulations (9VAC25-870 et Seq.). Refer to Section 1.1 for more information on general specifications. The use of the VESCH, along with the accompanying technical documents and

guidance, control measures is strongly preferred. Non-VESCH control measures, BMPs, and specifications may be included

3.1 Submittals

ESC and SWM plans, drawings and narratives shall be submitted to the UMW Facilities Services for review and approval prior to any land-disturbing activities. The plan reviewer shall have 30 days to review the plan and provide written comments.

Re-submittals shall include revision notes referenced to written comments. Prior to commencement of a land-disturbing project, the project must have received written approval for the plan(s) from the UMW Facility Services.

Projects requiring a CGP must submit a complete and accurate Registration Statement and Fee Form to UMW Facility Services. UMW will submit the completed Registration Statement to DEQ for issuance of the CGP.

- a. UMW documents ESC & SWM plan approval as appropriate by stamping two approved sets (provide copies to UMW and contractor), including approval letter signed by the UMW Program Administrator.
- b. UMW has an existing stormwater master plan and shares plan with design firms for new land disturbing projects to ensure that ESC & SWM plans are properly coordinated with the stormwater masterplan and to address any deficiencies if practical. UMW does use nutrient credits to address quality issues on certain projects and documents the purchases in a single spreadsheet. UMW has only made two purchases to date and these credits have been purchased on a project-specific basis. The nutrient credit spreadsheet will be used to update the stormwater master plan and inform the MS4 program.

3.2 Plan Reviews

Plan reviews shall be conducted by qualified personnel as per the requirements of 9VAC25-850-40.A. Plan reviews shall ensure compliance with the UMW Annual Standards and Specifications. Plan reviewers shall use the Plan Review Checklist provided in Appendix A for ESC and SWM plans.

3.3 Pre-Construction Conference

Prior to commencement of a land disturbance activity, a pre-construction conference shall be held in order to clarify ESC/SWM roles, responsibilities and obligations of all parties involved with the land-disturbing activity. At a minimum, the pre-construction conference will be attended by the UMW Project Manager, UMW ESC and SWM Project Inspector, UMW ESC and SWM Program Administrator, and the project RLD.

3.4 Inspections and Enforcement

Site inspections will be conducted by qualified personnel as defined in Section 2.0. The UMW project manager shall be responsible for ensuring that corrective measures are

taken in response to comments and potential violations noted during site inspections. Refer to Section 5.0 for more information on inspections and enforcement procedures.

3.5 Changes and Amendments

An approved plan may be changed by UMW Facilities Services in the following cases:

- a. Where inspection has revealed the plan is inadequate to satisfy applicable regulations; or
- b. Where the person responsible for carrying out the approved plan finds that because of changed circumstances or for other reasons the approved plan cannot be effectively carried out, and proposed amendments to the plan, consistent with the requirements of this article, are agreed to by the plan-approving authority and the person responsible for carrying out the plan.

Subject to the discretion of the inspector and/or project manager, revisions to an approved ESC/SWM plan must be submitted in writing to the UMW Facilities Services for review. Revisions shall not be considered approved until written notice is provided. Revisions must comply with the UMW Annual Standards and Specifications for ESC and SWM. The DEQ will be notified via email to constructionGP@deq.virginia.gov of any approved changes to the ESC/SWM plans and/or information on the Registration Statement.

4.0 CONSTRUCTION PLAN REQUIREMENTS

- Complete ESC and SWM plans shall be provided in the construction plans.
- Plans shall include the amount of disturbed area listed per phase and proposed net increase in impervious area, as well as, the pre- and post-construction land cover conditions as reported on the VRRM spreadsheet.
- Minimum Standards 1 through 19 (9VAC25-840-40) shall be listed in the construction plans.
- Construction sequence of operations shall be defined on the construction plans with staged implementation of erosion and sediment control measures for each phase. The area which may be disturbed in each phase shall be set forth in the construction plans.
- Construction plans shall provide information on the maintenance of all BMPs and erosion and sediment control measures or reference the narrative section that contains the information.
- Profiles shall be included for all closed and open storm systems. The profile shall include the existing surface, final surface, proposed water elevations, pipes, pipe crossings, and hydraulic grade line. Surcharges shall be clearly indicated on the profile.
- SWM calculations for quantity shall be in accordance with 9VAC25-870-66 and SWM calculations for quality shall be in accordance with 9VAC25-870-63 through -65.
- The SWM plans will be prepared in accordance with the requirements of 9VAC25-870-55.B.
- Proof of adequate outfall and adequacy of the receiving channel to the SWM treatment facility needs to be provided.
- Plans shall comply, to the maximum extent practicable, with any locality's VSMP ESC and SWM technical requirements or demonstrate that the locality's VSMP SCC and SWM technical requirements are not practicable for the project.

- Plans should also include a detailed landscape plan with a planting schedule.
- Stockpile/lay-down areas and trailer locations shall be provided on the plans for all phases.
- Any on-site changes shall be documented on the approved site plan and within the SWPPP.
- Land disturbing activity associated with the project but occurring at a separate location not on UMW property will require documentation of approval by the local program authority for the separate plan.
- A copy of the completed plan checklists (see Appendix A) shall be provided with the construction plans. A notation shall be provided for each checklist item, such as a specific plan sheet or narrative section, indicating the location where the requirement is addressed.

5.0 INSPECTIONS AND ENFORCEMENT

Periodic inspections shall be conducted, at a minimum, every two weeks and within 48 hours of a rainfall event producing runoff by a DEQ-Certified Inspector for ESC and SWM as appropriate. In addition, inspections shall be made during or immediately following initial installation of erosion and sediment controls and BMPs and at the completion of the project. Projects are considered complete after permanent stabilization has been accomplished at the site, not completion of the construction activities.

5.1 Erosion and Sediment Control Inspections

The ECS/SWM inspection report forms provided in Appendix B shall be used on each site inspection visit. All ECS measures shown on the plans shall be inspected and be conducted by a DEQ-Certified Inspector for ESC. All problems and violations shall be photographed and documented on the inspection report. Critical areas that require continuous inspections shall also be identified on the site plan. The inspection report shall specify the required corrective action for each issue or violation noted and a date by which all corrective actions must be completed. A copy of the inspection report will be provided to the project staff.

5.2 Stormwater Management Inspections

The ECS/SWM inspection report forms provided in Appendix B shall be used on each site inspection visit. All stormwater BMPs must be identified on the site plans and each one shall be inspected periodically by a DEQ-Certified Inspector for SWM. All problems and violations shall be photographed and documented on the inspection report. Critical areas that require continuous inspections shall also be identified on the site plan. The inspection report shall specify the required corrective action for each issue or violation noted and a date by which all corrective actions must be completed. A copy of the inspection report will be provided to the project staff.

- a. DEQ-certified SWM Inspectors shall provide for the periodic inspections of the installation of stormwater management measures. SWPPPs (General info, ESC plan, SWM plan, pollution prevention plan, TMDL requirements) shall be inspected at the beginning of the project and periodically

throughout. Projects should be inspected to ensure that they have obtained CGP permit coverage, if appropriate.

5.3 Enforcement

When a second or repeat violation is noted on subsequent inspections, a Notice to Comply may be issued by the UMW Program Administrator. The Notice to Comply will contain specific measures or corrections that need to be made and specify deadlines for completion.

Stop Work Orders will be issued when:

- a. The project has failed to meet the prescribed deadlines in a Notice to Comply;
- b. Land disturbing activities commenced without an approved plan; or
- c. Violations are causing or are in imminent danger of causing harmful erosion.

The Stop Work Order will be lifted once the required ESC/SWM measures or corrections are in place and verified by the Project's Inspector.

5.4 Project Close-out

As previously noted, project completion is defined as the achievement of permanent stabilization and verification of final product according to the approved plans. Project completion, concerning ESC and SWM, will be noted using the ESC/SWM Inspection Report Form. A notice of termination will be submitted to DEQ in accordance with 9VAC25-880-60.

At project close out, UMW MS4 coordinator will be notified in writing and assume responsible of post-construction inspections. Inspection requirements to be provided by MS4 post-construction SWM inspector.

5.5 Other Investigations

DEQ-Certified ESC/SWM Inspectors will also be responsible for responding in a timely manner to reports of alleged violations reported by University staff, students, adjacent property owners, or others. Corrective measures if warranted will follow standard procedures as outlined for ESC and SWM inspections.

In accordance with SWM - §62.1-44.15:31.C, the DEQ shall perform random site inspections or inspections in response to a complaint to assure compliance with this article, the Erosion and Sediment Control Law, and regulations adopted thereunder.

6.0 VARIANCES, DEVIATIONS AND EXCEPTIONS

Variances to the ESC Minimum Standards and regulations must ensure off-site properties and resources are protected from damage. Economic hardship is not sufficient reason to request.

For a variance to become part of the project specific ESC plan, a written variance request must be submitted by UMW to DEQ for review and approval. This request must include a detailed description of the alternative ESC practice and justification that the practice meets the intent of the Minimum Standard for which the variance is sought. (Ref. 9VAC25-840-50).

A deviation is the use of a non-standard VESCH control measure either listed in Appendix D as previously approved, or approved only for a project specific plan.

A request for an exception for Part II B or Part II C of the Stormwater Management Program Regulations must be submitted in writing by UMW to DEQ for review and approval. The request for an exception will be reviewed pursuant to 9VAC25-870-122. Economic hardship alone is not a sufficient reason to request an exception from the requirement of the Stormwater Management Program Regulations.

6.1 ESC Variance Request Procedures and Policy:

- a. All requests for project specific variances to UMW Annual Standards and Specifications shall be sent by the design professional to UMW Facilities Services and shall be accompanied by complete details and documentation, including justification for the requested variance and impacts associated with the variance request. The design professional shall complete the form included in Appendix C and include the elements for variance information required by the DEQ listed below.
- b. If determined to be appropriate by the UMW DEQ-Certified ESC Program Administrator and the DEQ-Certified Plan Reviewer, then the UMW DEQ-Certified ESC Program Administrator will send the variance request to the Virginia Erosion and Sediment Control Program Manager for review and approval.
- c. DEQ will consider variance requests freestanding of the Annual Standard and Specification submission and on a site-specific basis. UMW may (at DEQ's discretion) be required to produce documentation to demonstrate the applicability of variance requests. The following information may be required for the review of variance requests:
 - 1) Introduction
 - 2) Project Description
 - 3) Minimum Standards Variance Requests
 - 4) Existing Conditions and Adjacent Areas
 - 5) Soil Characterization

- 6) Critical and Sensitive Areas (Karst, wetland, etc...)
- 7) Mitigation
 - a) ESC Measures
 - b) Permanent Stabilization
 - c) Vegetative Restoration
 - d) Maintenance
 - e) Critical and Sensitive Areas
- 8) Self-Inspection, Reporting and DEQ-Certified Personnel
- d. All requested variances will be considered unapproved until written approval from DEQ is received.
- e. All approved variances shall be listed in the General Notes section of the plans for land disturbing activities and included in the Narrative.

6.2 ESC Deviations Request Procedures and Policy:

- a. If the plan shows a deviation by the use of a non-VESCH control measure not listed in Appendix D as previously approved, the designer is required to submit all applicable practical information including definition, purpose, condition where the practice applies, planning consideration, design criteria, construction specification, design tables, plates and maintenance and inspections.
- b. UMW reserves the right to approve or disapprove the non-VESCH control measure on a project-specific basis.
- c. ESC measures shall be designed and constructed in accordance with the VESCH or the manufacturer's recommendations as applicable.
- d. UMW and the DEQ have the discretion to disallow the use of any of the previously approved measures based on findings that demonstrate poor performance related to sedimentation control or maintenance.
- e. Sufficient detail shall be provided on the ESC Plan and in the Specifications for proprietary measures, including any necessary computations, installation, instructions, and inspection and maintenance instructions.

- f. Installation and maintenance shall be per the manufacturer's recommendations. A list of approved, non-VESCH measures can be found in Appendix D.
- g. Should non-VESCH control measures fail to effectively control soil erosion, sediment deposition, and non-agricultural runoff, then VESCH control measures shall be utilized.

Deviations for consideration of ESC measures not listed in Appendix D will only be considered when requested by an Applicant as part of a proposed ESC Plan or on-going land disturbance with an approved ESC Plan.

6.3 SWM Request for an Exception Procedures and Policy:

- a. If determined to be appropriate by the UMW DEQ-Certified Program Administrator for SWM and recommended by a DEQ-Certified Plan Reviewer for SWM, then the UMW DEQ-Certified ESC Program Administrator will submit the request for an exception to DEQ for review and approval.
- b. An exception may be granted provided that:
 - 1) The exception is the minimum necessary to afford relief,
 - 2) Reasonable and appropriate conditions shall be imposed as necessary upon any exception granted so that the intent of the Act and the Stormwater Management Program Regulations are preserved,
 - 3) Granting the exception will confer any special privileges that are denied in other similar circumstances, and
 - 4) Exception requests are not based upon condition or circumstances that are self-imposed or self-created.
- c. Economic hardship alone is not sufficient reason to grant an exception from the requirements.
- d. Under no circumstance shall an exception to the requirement that the land-disturbing activity obtain required state permits, nor approve the use of a BMP not found on the Virginia Stormwater BMP Clearinghouse Website, except where allowed under Part II C (9VAC25-870-93 et seq.) of the regulations.
- e. Exceptions to requirements for phosphorous reductions shall not be allowed unless offsite options available through 9VAC25-870-69 have been considered and found not available.

- f. A record of all exceptions granted by DEQ shall be maintained by UMW in accordance with 9VAC25-870-126.

7.0 LAND-DISTURBING ACTIVITIES

Land-disturbing activities that obtain an initial state permit or commence land disturbance prior to July 1, 2014, shall be conducted in accordance with the Part II C (9VAC25-870-93 et seq.) technical criteria. Such projects shall remain subject to the Part II C technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-47 B).

Land-disturbing activities that obtain an initial state permit on or after July 1, 2014, shall be conducted in accordance with the Part II B (9VAC25-870-62 et seq.) technical criteria, except as provided for in 9VAC24-870-48. Land-disturbing activities conducted in accordance with the Part IIB technical criteria shall remain subject to the Part IIB technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-47 B).

Grandfathered land-disturbing activities shall be subject to the Part II C technical criteria (9VAC25-870-93 et seq.). Land-disturbing activities will be considered grandfathered if they meet the conditions of 9VAC25-870-48. Grandfathered land disturbing activities shall be subject to Part II C technical criteria for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-48 C).

7.1 Proposed Land-disturbing activities:

A list of regulated land-disturbing activities expected to be under contract during the referenced time period will be submitted to DEQ semi-annually. The list will include project location, estimated disturbed acreage by watershed, and approximate start and completion dates for each project.

7.2 Current and Past Land-disturbing activities:

A list of completed and on-going regulated land-disturbing activities either under contract or terminated during the previously referenced time period will be submitted to DEQ semi-annually. The list includes project location, project start and completion date, and actual disturbed area.

7.3 Project Tracking and Notification

UMW will provide a semi-annual tracking report (Jan 1st and July 1st) to DEQ identifying project name, location, on-site project manager (with contact information), project description, project status (design or construction), estimated disturbed acreage, start and finish dates, applicable DEQ-Certified RLD information, dates of inspections, and any variances/exemptions/waivers associated with the project.

DEQ e-notifications (Standardsandspecs@deq.virginia.gov) shall be made 2 weeks prior to initiating a regulated land disturbing activity and will include the following information:

- a. Project name or project number (any associated CGP permit #),
- b. Project location (including nearest intersection, latitude and longitude, access point, etc.),
- c. On-site project manager name and contact information,
- d. Responsible Land-Disturber (RLD) name and contact information,
- e. Project description,
- f. Acreage of disturbance for project,
- g. Project start and finish date, and
- h. Any variances, waivers, or exemptions associated with the project.

8.0 ANNUAL STANDARDS AND SPECIFICATIONS REVIEW and EVALUATION

8.1 DEQ'S RESPONSIBILITIES:

- DEQ shall have sixty days in which to comment on any ECS and SWM standards and specifications submitted to it for review, and its comments shall be binding on UMW and any private business hired by UMW (§62.1-44.15:55.B).
- Enforcement by the DEQ for SWM will be in accordance with §62.1-44.15:27 F and for ESC in accordance with §62.1-44.15:54.E and §62.1-44.15:56G.
- DEQ is the authority for the issuance and termination Construction General Permits.
- DEQ fees for services rendered for SWM will be in accordance with §62.1-44.15:31.D.
- ESC fees to enforce approved specifications will be equal to the lower of (i) \$1,000 or (ii) an amount sufficient to cover the costs associated with standard and specification review and approval, project inspections, and compliance.

8.2 UMW'S RESPONSIBILITIES:

- UMW shall ensure compliance with the approved plans and annual standards and specifications (§62.1-44.15:56.G).
- Upon request by the DEQ, UMW shall provide a copy of the approved plan sheets and narrative for each regulated land-disturbing activity as outlined in Section 1.1.
- UMW will notify DEQ of the Responsible Land Disturber including RLD name, certification number and contact information at least 2 weeks prior to construction.
- UMW will notify DEQ of any newly emerging projects involving regulated land-disturbing activities during the current year as soon as they are known and prior to any land-disturbance.
- UMW shall provide DEQ with the appropriate information, in a timely manner, when requested, including:
 - Inspection Reports

- Complaint Logs
- Complaint Responses
- Weekly e-Reporting to the DEQ – Northern Regional Office, if required, will include:
 - Inspection reports
 - Pictures
 - Complaint logs and complaint responses
 - Other compliance documents

9.0 LONG-TERM MAINTENANCE

9.1 Project plans shall contain information on the long-term maintenance requirements for the post-construction BMPs. Permanent stormwater facilities shall be inspected as required by the stormwater regulations. The following information will be printed on the approved stormwater management plan:

- A description of the requirements for maintenance and maintenance inspection of the stormwater management facilities and a recommended schedule of maintenance inspection and maintenance.
- The identification of a person or persons who will be responsible for maintenance inspection and maintenance.
- The maintenance inspection schedule and maintenance requirements should be in accordance with the Virginia BMP Clearinghouse, the Virginia SWM Handbook, the MS4 permit (if applicable) and/or the manufacturer's specifications.
- The types of land cover on the site will be clearly depicted (i.e. different type of hatching for each land cover), including the acreage for each cover type. The acreage should be labeled in all of the subareas and provide a table that adds the land cover up by type on the sheet.
- The metes and bounds will be drawn all the way around any conserved open space.
- Any conserved open space will be labelled as "Runoff Reduction Compliance Forest / Open Space"
- The following note will be included on the sheet: "The Runoff Reduction Compliance Forest/Open Space area shown here shall be maintained in a forest/open space manner until such time that an amended storm water management plan is approved by the VSMP Authority."

9.2 UMW Roles and Responsibilities:

- (a) UMW DEQ-Certified SWM Program Administrator shall ensure BMPs are scheduled for annual inspection, beginning on their first anniversary based on the date of

Notice of Termination for the subject Construction General Permit. UMW SWM Program Administrator will provide pertinent BMP information to UMW's MS4 Coordinator.

- (b) UMW DEQ-Certified SWM Project Inspector will conduct annual post construction inspections of BMPs and report results to the UMW DEQ-Certified SWM Program Administrator. The post construction inspections will be conducted in accordance with the maintenance requirements laid out in the Virginia Stormwater BMP clearing house for each BMP. Copies of BMP inspection reports will be maintained for five (5) years.
- (c) UMW Facilities Services will be responsible for committing the necessary resources to maintain BMPs and correct deficiencies noted during these inspections.
- (d) UMW shall, on a fiscal year basis (July 1 to June 30), submit a Report to the DEQ by October 1 of each year, as prescribed in 9VAC25-870-126. The information provided shall include the following:
 - Information on each permanent stormwater management facility completed during the fiscal year to include type of stormwater management facility, geographic coordinates, acres treated, and the surface waters or karst feature into which the stormwater management facility will discharge
 - Comprehensive Stormwater BMP Record done in coordination with MS4 reporting requirements. Initial report will be submitted on or before March 2019 as part of semi-annual update for Land Disturbing Activities.
 - Number and type of enforcement actions during the fiscal year
 - Number of exceptions granted during the fiscal year.
 - UMW shall maintain, either onsite or in AS&S files, a copy of the approval plan and a record of inspection for each active land disturbing activity.
- (e) UMW shall keep records in accordance with 9VAC25-870-126 B, as follows:
 - Approved plans and inspection records for each active land-disturbing activity will be maintained at UMW's Facilities Services.
 - Project Records – including approved SWM plans, shall be kept for 3 years after state permit termination or project completion.
 - SWM facility inspection records shall be documented and retained for at least five years from the date on inspection.
 - Construction record drawings shall be maintained in perpetuity or until a SWM facility is removed.

- All registration statements submitted in accordance with 9VAC25-870-59 shall be documented and retained for a least there years from the date of project completion or stat permit terminations.



Appendix A
ESC/SWM Plan Checklists

Required Elements of a Plan
and
Minimum Standards

CHECKLIST

FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS

NARRATIVE

_____ Project description:

- Briefly describe the nature and purpose of the land-disturbing activity.
- How many acres will be disturbed?
- Is the pre- and post-Construction land condition consistent with the VRRM spreadsheet?
- How much impervious area will the project have in the post-development conditions?
- What are the ultimate developed conditions of the site?

_____ Existing site conditions:

- Provide a description of the existing topography (list percentage of slopes on-site).
- Provide drainage area maps of the site in pre-development and post-development conditions.
- Discuss types of existing vegetation that can be used as erosion control, or areas that are to be left undisturbed and how they will be marked.
- Discuss any existing drainage or erosion problems and how they are to be corrected.

_____ Adjacent areas:

- Provide a description of neighboring areas such as streams, lakes, CBPA Resource Protection Area (RPA), residential areas, roads, etc., which might be affected by the land disturbance.
- Streams that will receive runoff from the site should be surveyed to determine their carrying capacity.

_____ Off-site areas:

- Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.).
- If the site is in balance and no off-site land-disturbing activities are anticipated with this project include a statement in the narrative: "No off-site land-disturbing activities are anticipated with this project however, if due to unforeseen circumstance this changes, prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas) – soil hauled off-site, the contractor shall supply the owner (UMW DEQ-Certified ESC Program Administrator) with a supplementary erosion control plan for submittal to the receiving locality (City or County) and the University of Mary Washington for review and approval."
- Will any other areas be disturbed?

_____ Soils:

- Provide a brief description of the soils on the site giving such information as soil name, mapping unit, erodibility (K factor), pH, permeability, depth, texture and soil structure.
- Indicate references for soil information.
- Provide copy of soil survey map.

NARRATIVE (continued)

_____ Critical areas:

- Provide a description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, RPA, wet weather/ underground springs, etc.).
- Discuss any area of the project which may become critical during the project.

_____ Erosion and sediment control measures:

- Describe the methods which will be used to control erosion and sedimentation on the site.
- List all controls used, list specification numbers in Chapter 3 of the Virginia Erosion and Sediment Control Handbook.
- Discuss why control was selected and how it satisfies the applicable minimum standard(s).
- Discuss sequence of installation, maintenance requirements and removal for each control selected.
- Discuss Temporary Seeding as a means of erosion control, and list the types to be used.

_____ Permanent stabilization:

- Provide a brief description, including specifications, of how the site will be stabilized after construction is completed. Seed specifications are to include type, and rate and time of application.
- Include specifications for topsoil and seedbed preparation.
- List the soil testing requirements.
- Fertilizer and Lime applications are to be in accordance with the attached ESC technical Bulletin #4. Visit the DEQ web page at <http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf> for more information.

_____ Stormwater runoff considerations:

- Will the development site cause an increase in peak runoff rates?
- Will the increase in runoff cause flooding or channel degradation downstream? Discuss how downstream properties and waterways will be protected (basins, channel improvements, easements, etc.).
- Describe the strategy to control stormwater runoff.
- List or discuss all references for the design of permanent stormwater management facilities.
- Have the possibilities of incorporating low impact development strategies for addressing stormwater management water quality and quantity requirements been investigated?

_____ Maintenance of SWM Facilities:

- Provide a table with a description of the requirements for maintenance of the facility and a recommended schedule for inspections and maintenance.

Project Name _____ Project ID _____

- Include the following note on the plan sheet; "The Runoff Reduction Compliance Forest/Open Space area shown here shall be maintained in a forest/open space manner until such time that an amended storm water management plan is approved by the VSMP Authority."

_____ Water Quality:

- Is the plan in compliance with the water quality criteria and the Virginia Stormwater BMP Clearinghouse specifications? Provide supporting calculations. For each best management practice with a checklist, include a completed Design and Plan Review Checklist.

_____ Calculations:

- Provide detailed calculations for the design of temporary sediment traps and basins, diversions, on-site and off-site channels, permanent stormwater facilities, etc.
- Provide all calculations showing pre- and post-development runoff. Worksheets, assumptions and engineering decisions should be clearly presented.
- Calculations must show that downstream properties and waterways are adequately protected.

SITE PLAN

_____ Vicinity map:

- A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.

_____ Indicate north:

- Provide an arrow showing the direction of north in relation to the site.

_____ Limits of clearing and grading:

- Show all areas that will be cleared and graded.
- Provide notes on how these areas will be marked.
- Provide notes and illustrations that clearly indicate areas NOT to be disturbed.

_____ Existing contours:

- Provide a small-scale topographic map of the site showing the existing contours elevations at intervals of 1 to 5 feet depending on the slope of the terrain.
- Should be shown as dashed light lines.

_____ Final contours:

- Show changes to the existing contours, including final drainage patterns.
- Should be shown as heavy solid lines.

_____ Existing vegetation:

- Show the existing tree lines, grassed areas, or other unique vegetation.

_____ Soils:

Prepared/Reviewed By _____ Date _____

- Show the boundaries of different soil types.

_____ Existing drainage patterns:

- Show the dividing lines for each drainage area and use arrows to show the direction of flow for the different drainage areas.
- Include the size (acreage) of each drainage area.
- All existing drainage swales and patterns on the site should be located and clearly marked on the topographic map.
- Live or intermittent streams should be shown on the map.
- Show the drainage areas to each BMP/practice.

_____ Critical erosion areas:

- All critical, environmentally sensitive, or prohibited areas are to be clearly shown on the plan with notes provided to state the critical nature.

_____ Site Development:

- Show all improvements such as buildings, parking lots, access roads, easements, utility construction, etc.
- Show the pre- and post-construction land cover conditions as depicted on the VRRM spreadsheet.

_____ Location of practices:

- Show the locations of erosion and sediment control and stormwater management practices used on the site.
- Symbols showing vegetation are also to be shown.
- Use the standard symbols and abbreviations in Chapter 3 of the ESC Handbook.
- A legend denoting symbols, line uses, and other special characters is to be provided.

_____ Off-site areas:

- Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls.

_____ Detail drawings:

- All structural practices used should be explained and illustrated with detail drawings.
- All details should list the specification number from the VESCH.
- Alternative ESC measures must have proper drawings to indicate how and where they will be constructed.
- All plan drawings, elevations, and cross-section drawings are to show the scales used to prepare the drawings.
- A schedule of regular inspections and repair of each erosion and sediment control structure should be set forth including the maintenance items to check and perform as well as precautions for large storm events.
- Outlet protection schedules are to be provided.

Project Name _____ Project ID _____

_____ Maintenance:

- A schedule of regular inspections and repair of erosion and sediment control structures should be set forth including the maintenance items to check and perform as well as precautions for large storm events.
- List the person who is responsible during construction and who will be responsible once the project is complete.

Prepared/Reviewed By _____ Date _____

MINIMUM STANDARDS

- _____ MS-1 –Permanent or temporary soil stabilization shall be applied to denuded areas within 7 days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days.
- _____ MS-2 – Protection or stabilization of on-site and off-site soil stockpiles and borrow areas
- _____ MS-3 – Permanent vegetative stabilization of denuded areas not otherwise stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.
- _____ MS-4 – Install erosion and sediment controls as the first step in land-disturbing activity
- _____ MS-5 – Earthen controls and structures stabilized immediately upon installation
- _____ MS-6 – Trap and Basin design
Trap: < 3acres total drainage area, 134 cubic yards per acre storage
Basin: 3 acres or more total drainage area, 134 cubic yards per acre storage, safely handle a 25-year, 24-hour storm event
- _____ MS-7 – Design and construction of cut and fill slopes
- _____ MS-8 – Concentrated flow down cut and fill slopes
- _____ MS-9 – Slopes protected from seeps
- _____ MS-10 – Operational stormwater inlets must be protected
- _____ MS-11 – Outlets must be protected and stormwater conveyance channels stabilized before being made operational
- _____ MS-12 – Minimize impacts when working in and around live watercourses
- _____ MS-13 – Temporary vehicular stream crossings for more than 2 trips in 6 months

Project Name _____ Project ID _____

_____ MS-14 – Other federal, state, and local regulations pertaining to work in live watercourses
(Required permits COE, DEQ, VPDES, etc)

MINIMUM STANDARDS (Continued)

_____ MS-15 – Stabilize disturbed bed and banks of watercourses

_____ MS-16 – Utility installations (< 500 feet open trench, stockpile upgradient, filter dewatering effluent, backfill and compact, other safety requirements)

_____ MS-17 – Keep paved or public areas clean

_____ MS-18 – Remove temporary controls within 30 days when no longer needed

_____ MS-19 – Protect downstream properties and waterways from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration. Compliance with the water quantity minimum standards set out in 9VAC25-870-66 of the VSMP permit regulations satisfies the MS-19 standard.

Prepared/Reviewed By _____ Date _____

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1: Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et. seq.), and The Virginia Erosion and Sediment Control Regulations (§ 9VAC25-840 et. seq.),

ES-2: The plan-approving authority must be notified one week prior to the pre-construction conference, one week prior to the commencement of land disturbing activity, and one week prior to the final inspection. The name of the Responsible Land Disturber must be provided to the plan-approving authority prior to actual engagement in the land-disturbing activity shown on the approved plan. If the name is not provided prior to engaging in the land-disturbing activity, the plan's approval will be revoked.

ES-3: All erosion and sediment control measures are to be placed prior to or as the first step in clearing.

ES-4: A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.

ES-5: Prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the owner for review and approval by the plan-approving authority.

ES-6: The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan-approving authority.

ES- 7: All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved, after which, upon approval of the plan-approving authority, the controls shall be removed. Trapped sediment and the disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

ES-8: During dewatering operations, water shall be pumped into an approved filtering device.

ES-9: The contractor shall inspect all erosion control measures during or immediately following initial installation of erosion and sediment controls, at least once in every 2 week period, within 48 hours following any runoff producing storm event, and at the completion of the project prior to the release of any performance bonds. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

ES-10: The contractor is responsible for the daily removal of sediment that has been transported onto a paved or public road surface.

ES-11: Seeding operations shall be initiated within 7 days after reaching final grade or upon suspension of grading operations for anticipated duration of greater than 14 days or upon completion of grading operations for a specific area.

ES-12: The contractor shall be responsible for preventing surface and air movement of dust from exposed soils which may present health hazards, traffic safety problems, or harm animal or plant life.

ES-13: A Virginia Stormwater Management Program Permit (VSMPP) for the discharge of stormwater from construction activities is required for projects disturbing 1 acre or greater. Visit the Virginia Stormwater Management Program Regulations web page at: <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPPermits.aspx> for more information.



Appendix B
Inspection Report Forms

Reply To:
 Facilities Services
 University of Mary Washington
 1301 College Avenue
 Fredericksburg, VA 22401



Annual Standards and Specifications

INSPECTION REPORT

Project Name: _____ Project Manager: _____
 RLD Name: _____ RLD No. _____
 Project Location: _____ Project No: _____
 Inspector Name: _____ Inspection Date: _____ Time: _____

Date of Last Measurable Storm Event: _____ Amount (inches): _____ Storm Duration (hours): _____

STAGE OF CONSTRUCTION

Pre-Construction Conference ☐

Clearing & Grubbing ☐

Rough Grading ☐

Building Construction ☐

Finish Grading ☐

Final Stabilization ☐

Construction of SWM Facilities ☐

Maintenance of SWM Facilities ☐

Other _____ ☐

| Item# | State/Local Regulation ⁽¹⁾ | Violation | | Description and Location of Problem/Violation ⁽²⁾ , Required or Recommended Corrective Actions, and Other Comments/Notes |
|-------|---------------------------------------|-----------|--------|---|
| | | Initial | Repeat | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

(1) Refers to applicable regulation found in the most recent publication of the *Virginia Erosion and Sediment Control Regulations* (9VAC25-840), *Virginia Stormwater Management Program Regulations* (9VAC25-870), or local ESC/SWM ordinance.

(2) Note whether or not off-site damage resulting from the problem/violation was evident during the inspection.

REQUIRED CORRECTIVE ACTION DEADLINE DATE: _____ **Re-inspection Date:** _____
 (MM/DD/YY) (MM/DD/YY)

The required corrective action deadline date applies to all violations noted on this report. If listed violation(s) currently constitute non-compliance and/or required corrective actions are not completed by the deadline, a **NOTICE TO COMPLY** and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector: _____
 Signature Date Phone

| | | |
|--|------------|------|
| Acknowledgement of Onsite report receipt: _____ | | |
| Signature | Print Name | Date |
| This report will be provided to the following parties via mail, fax, or e-mail within 24 hours of inspection: _____ | | |



UNIVERSITY OF
MARY WASHINGTON

Annual Standards and Specifications

Project Name: _____ Inspection Date: _____

- (1) Refers to applicable regulation found in the most recent publication of the *Virginia Erosion and Sediment Control Regulations* (9VAC25-840), *Virginia Stormwater Management Program Regulations* (9VAC25-870), or local ESC/SWM ordinance.
- (2) Note whether or not off-site damage resulting from the problem/violation was evident during the inspection.

Fredericksburg, VA 22401



Stormwater BMP Inspection and Maintenance Log

[illegible][illegible]



Appendix C
Variance Request Form



Send to:
Gary Hobson, P.E.
UMW Facilities Services
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401
540-654-1292 (O) 540-654-1069 (fax)
Email: ghobson@umw.edu

VARIANCE REQUEST

Requested by: _____ **Date:** _____

Street Address: _____

City/Town/Zip: _____

Telephone #: _____ **Fax #:** _____

E-mail address: _____

Project Name/Location: _____

Project Description: _____

Variance requested for (state appropriate minimum standard & requirement): _____

Reasons and Justification for Variance Request: _____

**NOTE: Variance request documentation must be submitted with this form.
Refer to section 6.0 for the required information to be included.**

Signature of applicant: _____ **Date:** _____



Appendix D
APPROVED NON-STANDARD VESCH MEASURES

- **Filter Log**
- **Designate Washout Areas**
- **Dewatering Bag**

E-6 STANDARDS AND SPECIFICATIONS

FOR

FILTER LOG

Definition

A temporary, tubular casing filled with compost filter media.

Purpose

To intercept sheet flow, retain sediment, and filter runoff through the log media.

Conditions Where Practice Applies

Filter logs are an alternative to silt fence and can be used in hard to reach areas, on frozen ground and pavement, and near tree roots.

Note: fiber rolls are not interchangeable with filter logs. Although similar in appearance, fiber rolls are filled with rice or wheat straw, flax, coconut fiber, or wood excelsior, and are used when stabilizing and revegetating slopes because they slow and spread overland flow, thereby minimizing erosion, rills, and gullies.

Design Criteria

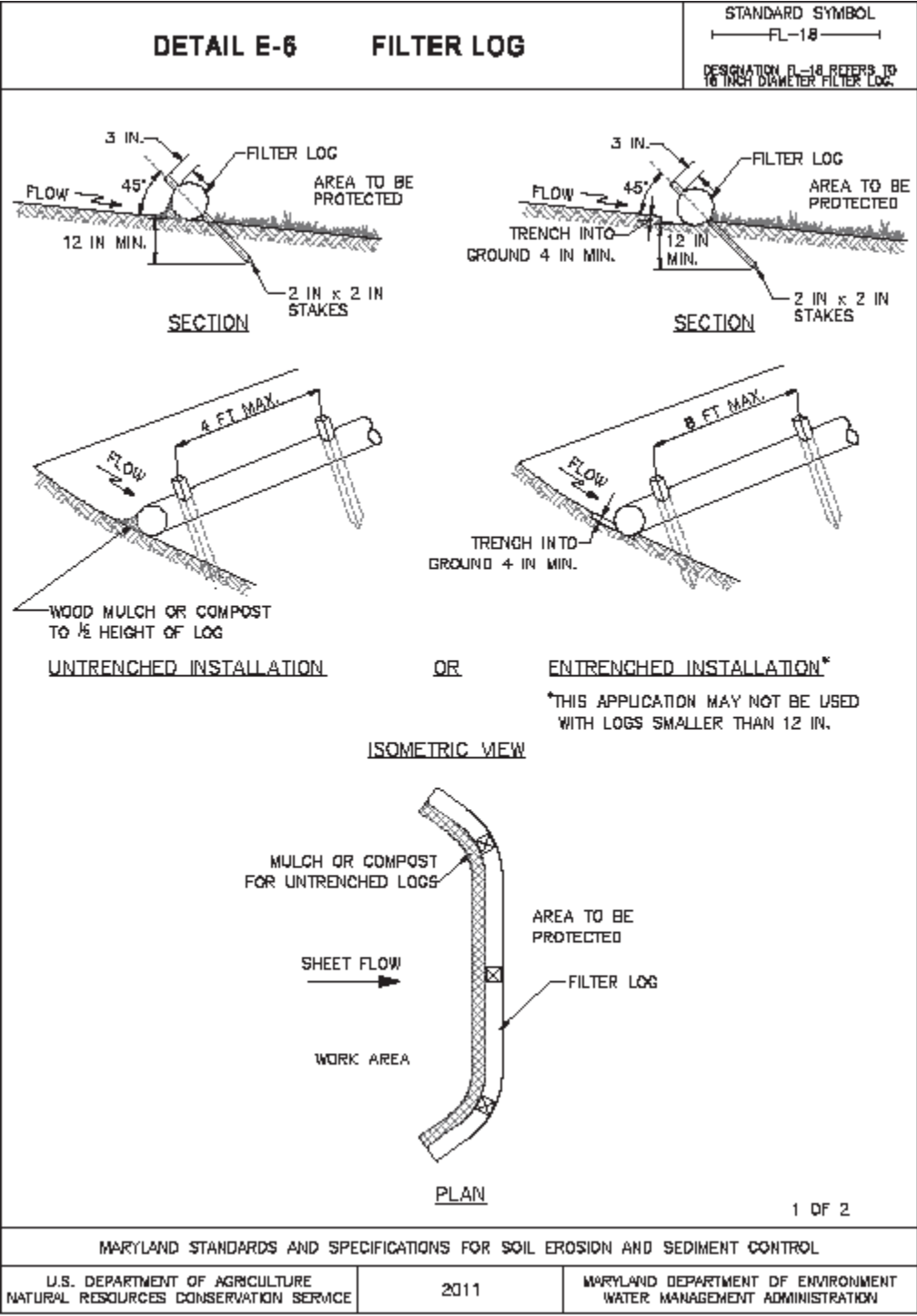
Table E.6: Filter Log Design Constraints


| Log Diameter | 8 to 15 inches | >15 to 24 inches |
|--------------------------|----------------------------------|----------------------------|
| Average Slope | Maximum Slope Length (ft) | |
| Flatter than 50:1 (<2%) | 125 | 250 |
| 50:1 to 10:1 (2 – 10%) | 65 | 125 |
| <10:1 to 5:1 (>10 – 20%) | 50 | 100 |
| <5:1 to 2:1 (>20 – 50%) | N/A | 50 |

1. Filter logs must be placed on the contour with the ends turned up grade to prevent bypass.
2. Filter logs can only be used with sheet flow.
3. Filter logs must be used in accordance with the design constraints in Table E.6.
4. The filter media must be compost in accordance with Table H.3 or other approved biodegradable materials.
5. Filter logs must either be staked every 4 feet maximum, or trenched a minimum of 4 inches into the ground and staked every 8 feet maximum.

Maintenance

Sediment and debris must be removed and mulch replaced when sediment has accumulated to a depth of one half the exposed height of the log. The filter log must be replaced if clogged or torn. The filter log needs to be reinstalled if undermined or dislodged. For permanent applications, vegetation must be established and maintained so that the requirements for Adequate Vegetative Establishment are met in accordance with Section B-4 Vegetative Stabilization.



| | | |
|--|------|--|
| DETAIL E-6 FILTER LOG | | STANDARD SYMBOL  DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG. |
| CONSTRUCTION SPECIFICATIONS <ol style="list-style-type: none"> 1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG. 2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM. 3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS. 4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG. 5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER. 6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG. 7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE. 8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF $\frac{1}{2}$ THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. | | |
| | | 2 OF 2 |
| MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | | |
| U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |

Designate Washout Areas

Instructions

Describe location(s) and controls to eliminate the potential for discharges from washout areas for concrete mixers, paint, stucco, and so on.

BMP Description

A designated temporary, above grade concrete washout area will be constructed as detailed on the site plans. The temporary concrete washout area could be constructed as shown in the figure below, with a recommended minimum length and minimum width of 10 feet and with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The washout area will be lined with plastic sheeting at least 10 mils thick and free of any holes or tears. Signs will be posted marking the location of the washout area to ensure that concrete equipment operators use the proper facility.

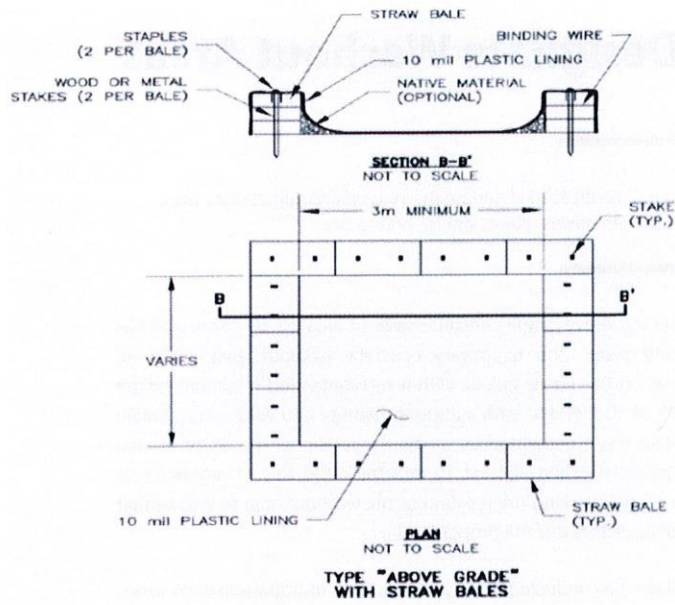
Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete wastes will be properly disposed of off-site. When the temporary washout area is no longer needed for the construction project, the hardened concrete and materials used to construct the area will be removed and disposed of according to the maintenance section below, and the area will be stabilized.

Installation Schedule

The washout area will be constructed before concrete pours occur at the site.

Maintenance and Inspection

The washout areas will be inspected daily to ensure that all concrete washing is being discharged into the washout area, no leaks or tears are present, and to identify when concrete wastes need to be removed. The washout areas will be cleaned out once the area is filled to 75 percent of the holding capacity. Once the area's holding capacity has been reached, the concrete wastes will be allowed to harden; the concrete will be broken up, removed, and taken to a nearby Landfill for disposal. The plastic sheeting will be replaced if tears occur during removal of concrete wastes from the washout area.



Design Specifications:

1. Temporary concrete washout type Above Grade will be constructed as shown above, with a recommended minimum length and minimum width of 10 feet.
2. The washout will be a minimum of 50 feet from storm drain inlets.
3. Plastic lining will be free of holes, tears, or other defects that compromise the impermeability of the material.

DEWATERING

DANDY DEWATERING BAG / DIRT BAG

Definition

A temporary settling and filtering device for water which is discharged from dewatering activities.

Purpose

To filter sediment-laden water prior to the water being discharged from the site.

Conditions Where Practice Applies

Wherever sediment-laden water must be removed from a construction site by means of pumping.



Planning Considerations

Minimum Standard #19 requires that properties and waterways downstream be protected from sediment deposition. Water which is pumped from a construction site usually contains a large amount of sediment. A dewatering structure is designed to remove the sediment before water is released off-site.

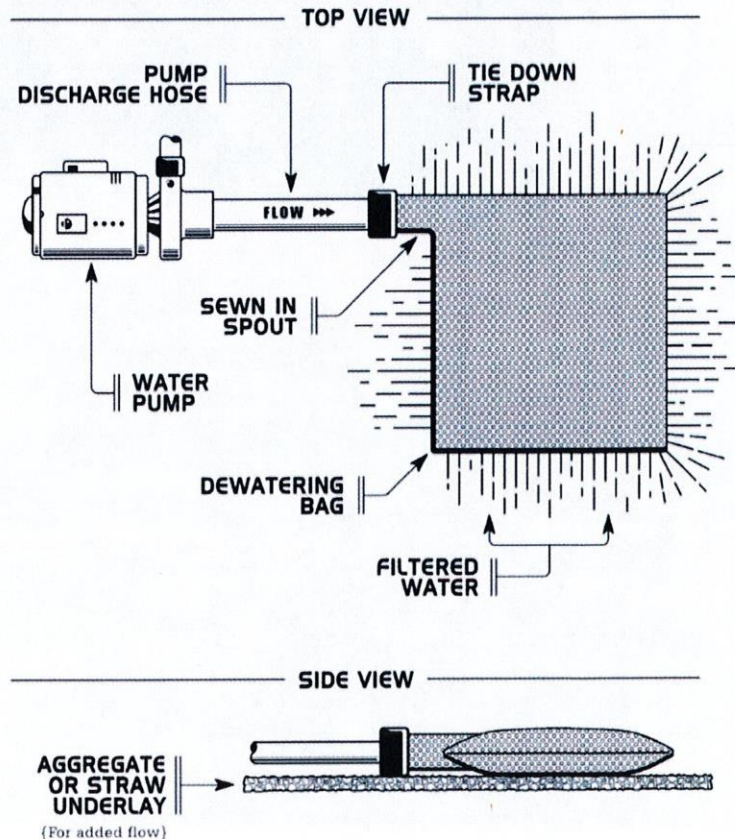
A dewatering structure may not be needed if there is a well stabilized, vegetated area on-site to which water may be discharged. The area must be stabilized so that it can filter sediment and at the same time withstand the velocity of the discharged water without eroding. A minimum filtering length of 75 feet must be available in order for such a method to be feasible.

Design Criteria

1. The Dewatering Bag used for each project must be sized appropriately for the pump used. DO NOT allow a pump to be used that discharges greater than the allowable rate allowed for the Dewatering Bag to be used.

Construction Specifications

1. Lifting straps (not included) should be placed under the unit to facilitate removal after use.
2. Unfold Dewatering Bag on a stabilized area over dense vegetation, straw, or gravel (if an increased drainage area is needed) or as detailed in plans.
3. Insert discharge hose from pump into Bag a minimum of six (6) inches and tightly secure with attached strap to prevent water from flowing out of the unit without being filtered.
4. Must be monitored during use.



Maintenance/Inspections

1. Ensure water is not discharging from the hose connection point. Stop pumping and re-secure if needed.
2. Replace the unit when $\frac{1}{2}$ full of sediment or when sediment has reduced the flow rate of the pump discharge to an impractical rate.